

### **ABSTRACT**

[0067] The present invention is directed to improving the accuracy with which a stationary array sensor provides cross directional measurements by providing an offset compensation to the stationary array sensor using the output of a scanning sensor associated with the manufacturing process. Exemplary embodiments correlate outputs from the stationary sensor array and the scanning array using a data reconciliation process. For example, a practical, real time data reconciliation of measurements from the scanning sensor and measurements from the stationary array sensor is achieved by computing offsets using a bank of Kalman filters to correlate outputs from the two sensors for each measurement zone, wherein each filter possesses a relatively simple computational structure. The Kalman filters can fuse the outputs from the stationary array sensor and the scanning sensor to track, and compensate, drift of the stationary array sensor.